

# Technical assistance in supporting adaptation: Examples for wine grapes

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# Projection/assumption:

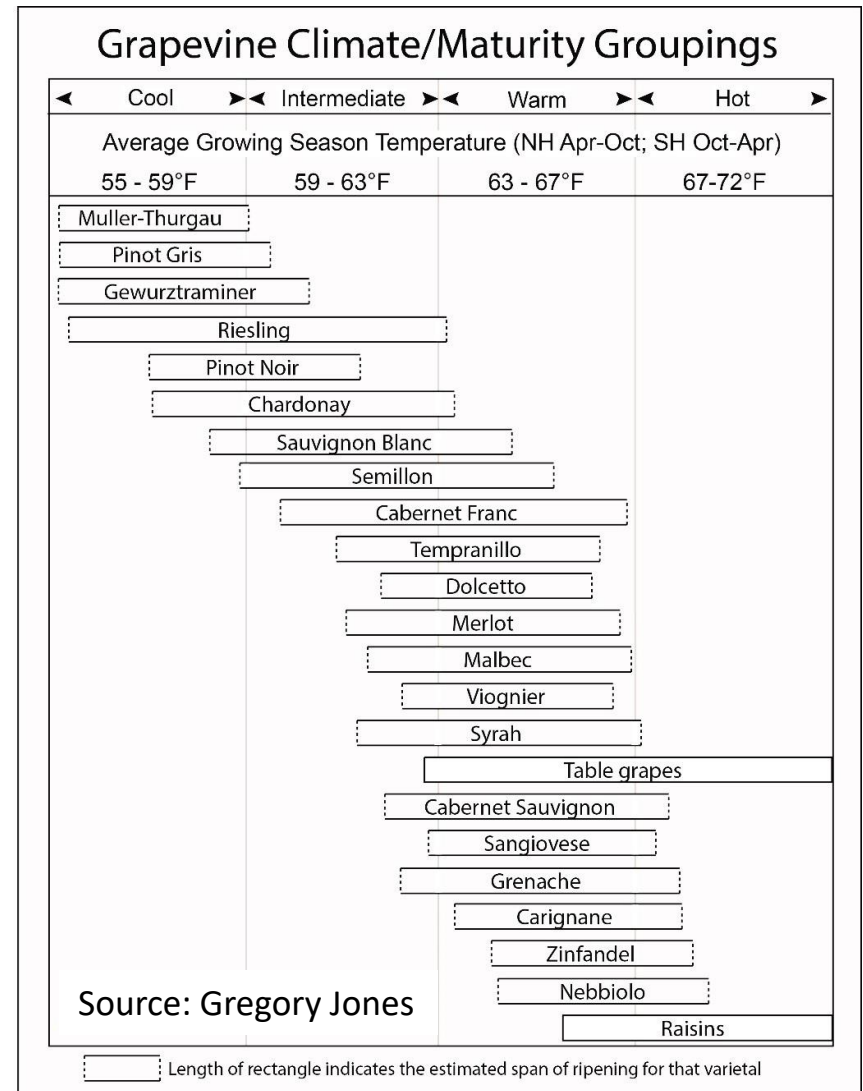
- Conditions will become both hotter & drier
- Other factors also leading to increased demand for limited water resources

# Strategies for adaptation

- Choose adapted varieties
- Select microclimate with trellis
- Modify microclimate with field practices
- Improve water use efficiency
  - Irrigation practices/tools
  - Frost protection

# Technical assistance: varieties

- Temperature requirements of current and alternative varieties



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- Temperature requirements of current and alternative varieties

Wine grape varieties from FPS:  
Abrusco, Adreuli Skelkana,  
Affenthaler, Agiorgitiko,  
Aglianico, Airén, Albariño,  
Aleatico, Alexandrouli,  
Alfrocheiro, Alicante Bouschet,  
Aligoté, Alvarelhão, Alvarinho,  
Arandell, Arinarnoa, Arinto,  
Arneis, Arnsburger, Aromella,  
Arvine, Assyrtiko, Aurore,  
Auxerrois, Avgoustiatis...  
...and this is just the A's...

*\* Cabernet Sauvignon and Chardonnay total over 25% of statewide crush*

# Technical assistance: trellis

- Factors that influence heat conditions:
  - Row orientation





# Technical assistance: trellis

- Factors that influence heat conditions:
  - Row orientation
  - Trellis height



# Technical assistance: trellis

- Factors that influence heat conditions:
  - Row orientation
  - Trellis height
  - Canopy management effect on shading fruit





# Technical assistance: practices

- Modify microclimate by using:
  - Shade cloths
  - Reflective sprays
  - Vineyard floor management
  - Sprinklers





# Technical assistance: water

- Improving tools/information to manage



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Assistance for  
Groundwater  
Sustainability Agencies  
that will be tasked with  
managing groundwater

*“Paso Robles vineyard  
irrigation study  
provides benchmark data to  
assist future area  
groundwater management”*

California Agriculture  
January-March 2018

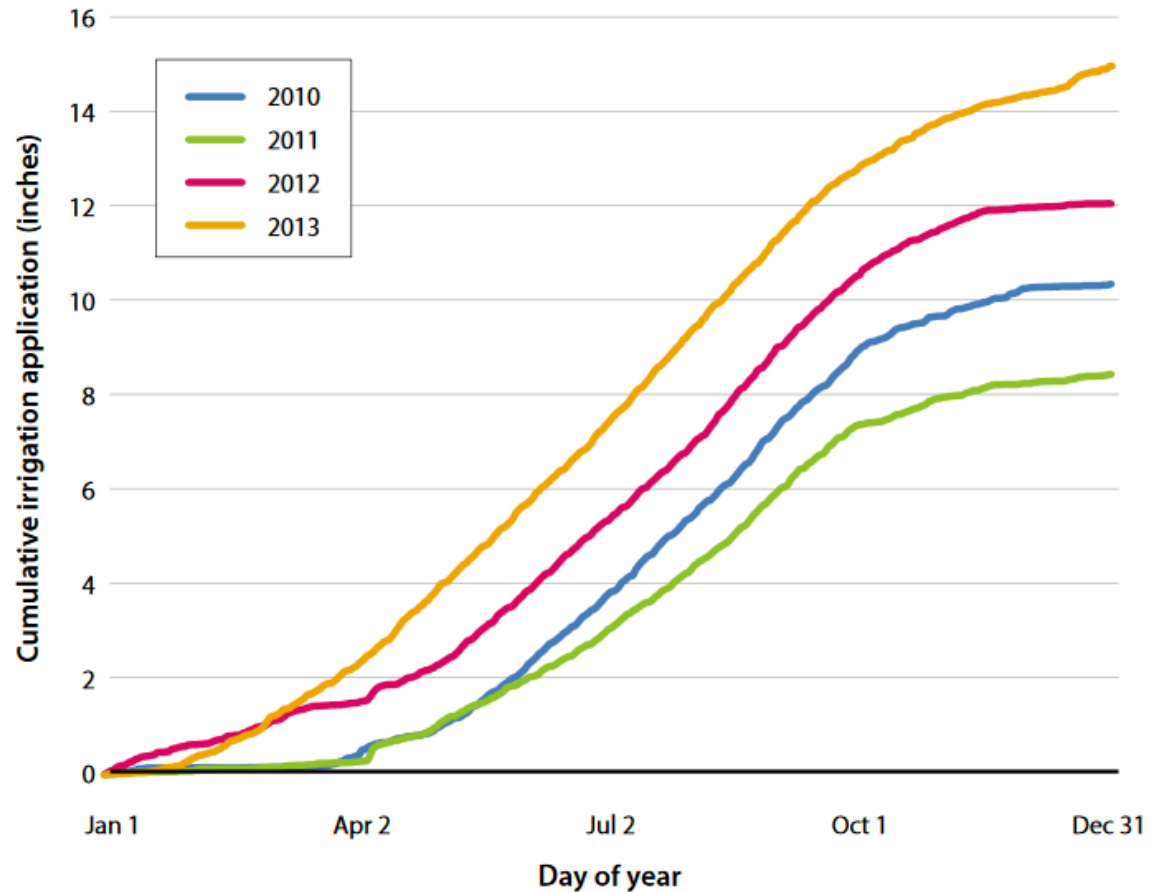
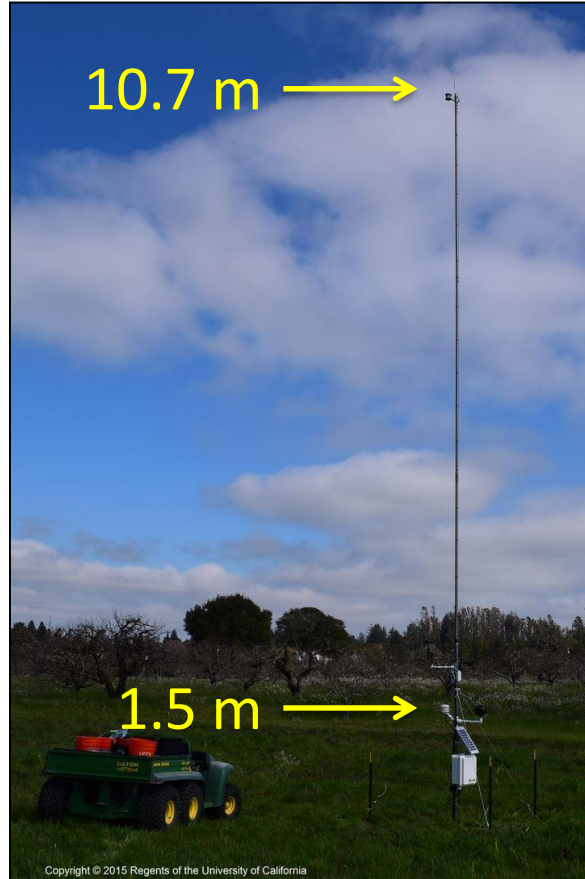


FIG. 4. Average cumulative irrigation application for each calendar year.



# Technical assistance: frost



# Thanks!

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